

REMARKS

Claims 1-8 and 10-21 remain pending in the above-referenced application.

Claims 1-3, 7, and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 4,863,549 to Grunwald. Applicants submit that Grunwald does not anticipate any of the claims currently pending. With regard to independent claim 1, the Examiner refers to the document of Grunwald and concludes from this teaching "...which includes at least approximately ambipolar plasma by injecting high frequency power into the substrate electrode...". Independently of whether this conclusion applies or not, in any case Grunwald does not teach the feature "if an at least approximately ambipolar plasma is present, refraining from injecting a high-frequency power into the etching body via a substrate electrode." This procedure, namely to interrupt the coupling in of the high frequency power via the substrate electrode when approximately an ambipolar plasma is present is not known from Grunwald".

With regard to independent Claim 7, as has been established, it is not provided at all in the teaching of Grunwald to modulate the plasma or its intensity. That means especially that it is not possible to carry out the pulsing of the plasma intensity at a frequency of at least 500 Hz.

Claims 4-6, 10-15, and 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grunwald in view of United States Patent No. 5,290,383 to Koshimizu. With regard to independent Claim 4, it is known neither from Grunwald nor Koshimizu that one may modulate the plasma intensity. In Grunwald it is only described that the pulse width of the substrate electrode voltage can be modulated. One should take note in the figure of Grunwald that modulator 13 is only connected to substrate electrode 6, but not to upper electrode 5. The modulating of the plasma, on the one hand, and the modulating of the substrate electrode, on the other hand, are basically two different processes. Claim 4, by the way, additionally requires that there is a fixed, whole-numbered phase ratio between the two pulse sequences.

With regard to independent Claim 11, Applicants submit that it is not provided at all in the teaching according to Grunwald or Koshimizu to furnish the etching procedure with an ambipolar plasma. In an ambipolar plasma, the polarity of the plasma is close to 0. Such a state is not to be expected in a "normal" plasma, but rather, the polarity amounts to close to 1, (for explanation, see paragraph [0026] of Laid-Open Document US 2004/0124177 A1 of the Application). By contrast, an ambipolar plasma is to be expected in response to switching off the plasma. Since, however, pulsing of the plasma is not provided in the

teaching according to Grunwald, an ambipolar plasma is not to be expected in the etching process itself.

Claims 16 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grunwald in view of United States Patent No. 5,779,925 to Hashimoto et al. As was established, contrary to the opinion of the Examiner, in the teaching according to Grunwald it is not provided at all to modulate the plasma or its intensity. However, this is explicitly called for in Claim 16. Moreover, Hashimoto does not overcome this deficiency.

In summary, Applicants submit that all the independent Claims 1, 4, 7, 11 and 16 (and their respective dependent claims) are novel and non-obvious.

It is respectfully submitted that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully submitted,

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Dated: 6/7/04

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